



Royal Commission on Matters of Health
and Safety Arising from the Use of
Asbestos in Ontario

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Proceedings of The Royal Commission on Asbestos, First Public Meeting, Friday, October 31, 1980

Reporter: Elizabeth J. Hiscott, B. Sc.



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Chairman:
J. Stefan Dupré, Ph.D.
Commissioners:
J. Fraser Mustard, M.D.
Robert Uffen, Ph.D., P. Eng., F.R.S.C.
Director of Research:
Donald Dewees, Ph.D.
Legal Counsel:
John I. Laskin, LL.B.
Executive Co-ordinator:
Linda Kahn, M.P.A.

Royal Commission on Matters of Health
and Safety Arising from the Use of
Asbestos in Ontario

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PROCEEDINGS OF FIRST PUBLIC MEETING

FRIDAY, OCTOBER 31, 1980

ONTARIO INSTITUTE FOR STUDIES IN EDUCATION
AUDITORIUM

9:30 a.m. - 4:30 p.m.

REPORTER: ELIZABETH J. HISCOTT, B.Sc.

December, 1980



Project Commission on Medical Research
and Safety Among the Use of
Experiments in Animals

THE
ROYAL
COMMISSION
ON MEDICAL
RESEARCH
AND SAFETY
AMONG THE
USE OF
EXPERIMENTS
IN ANIMALS
REPORT
1964

PROCESSES OF THE PUBLIC SERVICE
IN THE
UNITED KINGDOM OF GREAT BRITAIN

THE
ROYAL
COMMISSION
ON MEDICAL
RESEARCH
AND SAFETY
AMONG THE
USE OF
EXPERIMENTS
IN ANIMALS
REPORT
1964

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1. Introduction

In April, 1980, Ontario's Minister of Labour, the Honourable Robert G. Elgie, M.D., announced in the Legislature the creation of the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario. The Commission's terms of reference are as follows:

- (1) To investigate all matters relating to health and safety arising from the use of asbestos in Ontario;
- (2) To identify the relevant data related to asbestosis, mesothelioma, and other diseases and health hazards of persons working with, or exposed to, asbestos in Ontario;
- (3) To review the present basis for Workmen's Compensation Board awards as they relate to occupational health matters affecting workers exposed to asbestos, including any special programmes dealing with the rehabilitation of such workers;
- (4) To make such recommendations in relation to the above as the Commission deems appropriate.

The Minister of Labour named Dr. J. Stefan Dupré to serve as Chairman of the Commission, and Dr. J. Fraser Mustard and Dr. Robert J. Uffen as Commissioners.

The Commission's staff includes Dr. Donald N. Dewees, B.S.E.E., LL.B., Ph.D., as Director of Research; Mr. John I. Laskin, LL.B., as Legal Counsel; and Ms. Linda B. Kahn, M.P.A., as Executive Co-ordinator.

From a reading of the Commission's terms of reference, it is evident that the Royal Commission on Asbestos is concerned with questions which are often highly technical and complex. In a preliminary effort to explore some of these questions in an open forum, the Commission decided to hold two public meetings during the fall of 1980. These were meant to be educative sessions -- both for the Commission and the audience. The Commission scheduled its meetings for Friday, October 31 and Friday, December 12, 1980.

As Commission Chairman Dr. J. Stefan Dupré explained in his opening speech on October 31, both public meetings precede in time the Commission's deadlines for written submissions and its schedule of public hearings.

Information regarding the public meetings was disseminated via a newspaper advertisement, a brochure, and a newsletter. As a result, approximately 230 people attended both the first and second public meetings.

What follows, then, is a summary report of the proceedings of the Royal Commission on Asbestos' first public meeting.

ROYAL COMMISSION ON ASBESTOS

2.

Public Meeting #1

Friday, October 31, 1980

Ontario Institute for Studies in Education Auditorium

252 Bloor Street West

AGENDA

- 9:00 a.m. - Registration
9:30 a.m.
- 9:30 a.m. - Address by Dr. J. Stefan Dupré, Chairman,
10:00 a.m. Royal Commission on Asbestos
- 10:00 a.m. - Question Period
10:30 a.m.
- 10:30 a.m. - Coffee Break
10:45 a.m.
- 10:45 a.m. - Address by Dr. Gordon Atherley, President, Canadian
11:45 a.m. Centre for Occupational Health and Safety on "Review of
Four Major Studies on the Health Effects of Asbestos"
- Session Chairman: Dr. J. Fraser Mustard, Commissioner,
Royal Commission on Asbestos
- 11:45 a.m. - Question Period
12:30 p.m.
- 12:30 p.m. - Lunch Break
2:00 p.m. (Note: Lunch is not being served by the Commission.)
- 2:00 p.m. - Panel Presentation on the Ontario Government's
3:30 p.m. Schools Programme for Detecting and Controlling Asbestos
- Panel Participants:
- Stanley Orlowski, Associate Chief Architect,
Grants Policy Branch, Ministry of Education;
 - Keith Reilly, Public Safety Division, Office of the
Fire Marshal, Ministry of the Solicitor General;
 - Gerald Ridge, Director, Capital Programming and Research,
Metropolitan Toronto School Board (on behalf of the
Association of Large School Boards of Ontario);
 - Sheila Parker, Chairman, Northumberland-Newcastle
Board of Education;
 - Doug Craig, Ontario Association of School Business Officials
- Session Chairman: Dr. Robert J. Uffen, Commissioner,
Royal Commission on Asbestos
- 3:30 p.m. - Coffee Break
3:34 p.m.
- 3:45 p.m. - Question Period
4:15 p.m.

2. Address by Dr. J. Stefan Dupré, Chairman, Royal Commission on Asbestos

After introducing himself and his fellow Commissioners, Dr. J. Fraser Mustard and Dr. Robert J. Uffen, Dr. Dupré introduced the Commission's staff, Dr. Donald N. Dewees, Director of Research; Mr. John I. Laskin, Legal Counsel to the Commission; and Ms. Linda B. Kahn, Executive Co-ordinator.

Dr. Dupré gave the following address, which is reproduced herein verbatim.

WE ARE GRATIFIED BY THE WIDESPREAD INTEREST THAT HAS BEEN EXPRESSED IN THE ASSIGNMENT WE HAVE UNDERTAKEN. THIS INTEREST IS EVIDENT FROM THE ATTENDANCE HERE THIS MORNING, AND ALSO FROM THE RESPONSE TO OUR BROCHURE. AS OF LAST WEEK, WE HAD RECEIVED OVER 600 RESPONSE CARDS FROM EVERY PART OF ONTARIO, FROM MOST CANADIAN PROVINCES AND FROM MANY FOREIGN JURISDICTIONS. ON BEHALF OF MY COLLEAGUES, I WISH TO THANK ALL PRESENT FOR THEIR WELCOME ATTENDANCE TODAY, AND ALL OTHERS WHO HAVE EXPRESSED AN INTEREST IN OUR WORK AND WHO HENCEFORTH WILL BE ON OUR PERMANENT MAILING LIST. SO THAT YOU WHO ARE PRESENT THIS MORNING MAY KNOW WHO YOU ARE, WE HAVE DISTRIBUTED THE NAMES AND AFFILIATIONS OF THOSE WHO WERE REGISTERED FOR THIS MEETING AS OF LAST WEEK.

THIS IS THE FIRST PUBLIC MEETING OF THE ROYAL COMMISSION ON ASBESTOS, AND WE HAVE A THREE-PART AGENDA. WE ARE NOW IN PART I OF THE AGENDA, WHICH WILL PERMIT ME TO SHARE WITH YOU THE GENERAL PROCEDURES THE COMMISSION INTENDS TO FOLLOW AND

WILL ENABLE YOU TO POSE SUCH QUESTIONS AS YOU MAY WISH TO ASK.

IN PART II OF OUR AGENDA, MY COLLEAGUE DR. MUSTARD WILL ASSUME THE CHAIR, AND INTRODUCE DR. GORDON ATHERLEY OF THE CANADIAN CENTRE FOR OCCUPATIONAL HEALTH AND SAFETY. OURS IS BY NO MEANS THE FIRST GOVERNMENTALLY COMMISSIONED STUDY OF HEALTH MATTERS ARISING FROM THE USE OF ASBESTOS. IT IS THEREFORE APPROPRIATE FOR ALL OF US TO BE AWARE OF THE WORK THAT HAS BEEN DONE BY OTHERS. SHORTLY AFTER OUR APPOINTMENT AS A COMMISSION, WE SINGLED OUT FOUR STUDIES THAT WERE CONDUCTED RECENTLY UNDER OFFICIAL AUSPICES AS WORTHY OF EARLY ATTENTION. THESE STUDIES ARE:

THE FINAL REPORT OF THE UNITED KINGDOM
ADVISORY COMMITTEE ON ASBESTOS, 1979;

THE REPORT ENTITLED "EFFECTS OF ASBESTOS IN
THE CANADIAN ENVIRONMENT" FROM THE
ASSOCIATE COMMITTEE ON SCIENTIFIC CRITERIA
FOR ENVIRONMENTAL QUALITY OF THE NATIONAL
RESEARCH COUNCIL OF CANADA, 1979;

THE REPORT ENTITLED "WORKPLACE EXPOSURE TO
ASBESTOS" COMMISSIONED BY THE UNITED STATES
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY
AND HEALTH AND THE OCCUPATIONAL SAFETY AND
HEALTH ADMINISTRATION, 1980;

THE REPORT ENTITLED "PUBLIC HEALTH RISKS OF
EXPOSURE TO ASBESTOS" BY A WORKING GROUP
OF EXPERTS ESTABLISHED BY THE COMMISSION
OF THE EUROPEAN COMMUNITIES, 1977,

WE THOUGHT IT WOULD BE USEFUL, NOT ONLY FOR OURSELVES, BUT
FOR ALL INTERESTED PARTIES, TO RECEIVE A PRESENTATION CONCERNING

WHAT THESE STUDIES TELL US ABOUT THE HEALTH EFFECTS OF ASBESTOS. DR. ATHERLEY KINDLY VOLUNTEERED THE SERVICES OF THE CANADIAN CENTRE FOR OCCUPATIONAL HEALTH AND SAFETY, AND HE WILL TELL US WHAT LIGHT THESE STUDIES SHED ON NINE QUESTIONS THAT MY COLLEAGUES AND I POSED ABOUT THE HEALTH EFFECTS OF ASBESTOS.

PART III OF TODAY'S AGENDA WILL TAKE PLACE THIS AFTERNOON BETWEEN 2 AND 4 P.M. MY COLLEAGUE DR. UFFEN WILL CHAIR A PANEL OF INDIVIDUALS WHO HAVE GRACIOUSLY CONSENTED TO SHARE WITH US THEIR EXPERIENCE WITH THE ONGOING PROGRAM OF ASBESTOS CONTROL IN ONTARIO SCHOOLS. THE POSSIBLE EXPOSURE OF CHILDREN TO ASBESTOS FIBRES HAS BEEN A SOURCE OF ANXIETY IN MANY JURISDICTIONS. WE DEEMED IT HIGHLY APPROPRIATE TO INFORM THE PUBLIC OF WHAT IS BEING DONE IN ONTARIO CONCERNING THIS MATTER. WE APPRECIATE THAT THERE MAY BE ANY OF A NUMBER OF ISSUES ASSOCIATED WITH THE CONTROL OF ASBESTOS IN SCHOOLS THAT ARE APPROPRIATE MATTERS FOR FORMAL SUBMISSIONS IN LATER PHASES OF OUR WORK, OUR PANEL IS NOT HERE TO CANVASS SUCH ISSUES. RATHER, THE PANEL, AS A PRELUDE TO THE POSING OF SUCH ISSUES, IS SIMPLY HERE TO SERVE THE PUBLIC'S NEED TO KNOW ABOUT AN IMPORTANT AND ONGOING GOVERNMENT PROGRAM.

HAVING OUTLINED THE GEOGRAPHY OF THE DAY, LET ME NOW FOCUS ON THE GENERAL PROCEDURES THE COMMISSION INTENDS TO FOLLOW, I SHALL DO SO BY ADDRESSING THE FOLLOWING QUESTIONS.

1. HOW DOES THE COMMISSION PROPOSE TO HANDLE WRITTEN SUBMISSIONS?

2. How does the Commission propose to conduct its hearings?
3. How will the Commission handle applications from parties who wish to have formal standing at its hearings?
4. What will be the Commission's approach to the calling of witnesses?
5. What is the Commission's position on providing financial help to parties who may wish to apply for assistance in preparing their submissions?
6. How does the Commission's work relate to the ongoing initiatives of the Government of Ontario in the realm of asbestos regulation and control?
7. What is the Commission's outlook with respect to the timing of its activities?

1. How does the Commission propose to handle written

submissions: As you are already aware from our brochure, we have established two deadline dates for the receipt of written submissions. The first date is January 16, 1981, and applies to submissions on all matters except workmen's compensation. The second date is May 29, 1981, and applies to submissions on workmen's compensation matters. Why did we set a later deadline for submissions on workmen's compensation? We did so because, as many of you are aware, the entire area of workmen's compensation is currently being reviewed at the behest of the Minister of Labour by Professor Paul C. Weiler of the Harvard Law School. In that Professor Weiler's study can be expected to affect the policy environment of workmen's compensation in Ontario, it is evidently desirable to permit those who wish to make submissions in this area to have the

BENEFIT OF HIS RECOMMENDATIONS ON THE SUBJECT, AND OF INITIAL REACTIONS TO THESE RECOMMENDATIONS. OUR DEADLINE OF MAY 29 FOR BRIEFS DEALING WITH WORKMEN'S COMPENSATION IS INTENDED TO MAKE THIS POSSIBLE.

WE SHALL CONSIDER ALL WRITTEN SUBMISSIONS TO BE PUBLIC DOCUMENTS. WITHIN ONE WEEK OF THE RESPECTIVE DEADLINES OF JANUARY 16TH AND MAY 29TH, WE SHALL CIRCULATE TO ALL PARTIES ON OUR MAILING LIST THE NAMES OF THE GROUPS OR INDIVIDUALS WHO HAVE DEPOSITED WRITTEN SUBMISSIONS, TOGETHER WITH THE APPROXIMATE LENGTH OF EACH SUBMISSION. INDIVIDUALS NEED ONLY GIVE US ONE COPY OF THEIR SUBMISSIONS. WE ASK THAT ASSOCIATIONS, FIRMS AND UNIONS SUPPLY US WITH EIGHT COPIES. COPIES OF ALL SUBMISSIONS WILL BE AVAILABLE FOR CONSULTATION AT THE COMMISSION OFFICES BY EARLY FEBRUARY AND, WITH RESPECT TO WORKMEN'S COMPENSATION, BY MID-JUNE. PARTIES WHO WISH TO OBTAIN THEIR OWN COPIES SHOULD ARRANGE FOR THE RECIPROCAL EXCHANGE OF THEIR SUBMISSION EITHER DIRECTLY WITH OTHER PARTIES OR THROUGH THE AUSPICES OF OUR EXECUTIVE CO-ORDINATOR, MISS LINDA KAHN.

HOW FIRM ARE THE DEADLINE DATES THAT WE HAVE SET FOR THE RECEIPT OF SUBMISSIONS? WE MUST TREAT THESE DEADLINES SERIOUSLY IF OUR WORK IS TO PROCEED EXPEDITIOUSLY AND IN A MANNER THAT WILL GIVE ALL PARTIES ACCESS TO ONE ANOTHER'S VIEWS. IN PARTICULAR, THEREFORE, WE APPEAL TO ORGANIZED INTERESTS, BE THEY ASSOCIATIONS, FIRMS OR UNIONS, TO ADHERE TO OUR DEADLINES. IT MAY BE THAT THE PUBLICITY ATTENDANT UPON OUR HEARINGS WILL PROMPT SUBMISSIONS FROM THE PUBLIC OR FROM UNEXPECTED QUARTERS. WE ARE READY TO RECEIVE SUCH SUBMISSIONS OUTSIDE THE TIME FRAMEWORK

SET BY OUR DEADLINES, BUT WE CANNOT UNDERTAKE TO GUARANTEE THAT THE AUTHORS OF LATE SUBMISSIONS WILL BE ACCORDED AN OPPORTUNITY TO APPEAR BEFORE US. A TIMELY SUBMISSION IS THEREFORE THE TICKET NECESSARY TO GUARANTEE A PLACE ON OUR SCHEDULE OF HEARING REQUESTS BY PARTIES TO FILE SUPPLEMENTARY SUBMISSIONS WILL BE CONSIDERED IF THEY ARE MADE AT THE HEARINGS, AND WE RESERVE THE RIGHT TO MAKE SUCH REQUESTS OURSELVES IF THEY APPEAR DESIRABLE TO THE PROGRESS OF OUR WORK.

2. HOW DOES THE COMMISSION PROPOSE TO CONDUCT ITS HEARINGS?

OUR BROAD MANDATE IS TO EXAMINE ALL MATTERS OF HEALTH AND SAFETY ARISING FROM THE USE OF ASBESTOS IN ONTARIO. WE WISH TO CONDUCT OUR HEARINGS IN SUCH A WAY AS TO ENSURE WIDE PARTICIPATION BY ALL WHO ARE CONCERNED WITH OUR WORK. THIS CALLS FOR AN ATMOSPHERE THAT WILL BE AS OPEN AND INFORMAL AS POSSIBLE. ALSO, HOWEVER, DUE ALLOWANCES MUST BE MADE FOR CERTAIN MATTERS WHOSE CLARIFICATION MAY REQUIRE THE FORMAL EXAMINATION OF KNOWLEDGEABLE WITNESSES BY OURSELVES, BY OUR COUNSEL, OR BY PARTIES WITH A DIRECT INTEREST IN OUR WORK. WE PROPOSE TO MEET THESE VARIED REQUIREMENTS BY CONDUCTING OUR HEARINGS IN FOUR DISTINCT PHASES.

PHASE I IS SCHEDULED TO BEGIN IN MID-FEBRUARY. DURING THIS PHASE, ALL PRESENTERS OF WRITTEN SUBMISSIONS WHO HAVE MET OUR JANUARY 16 DEADLINE WILL BE INVITED TO SPEAK BRIEFLY TO THEIR SUBMISSIONS AND TO ANSWER QUESTIONS FROM US AND FROM THE FLOOR. THE INTENT OF THIS PHASE IS "TO LET IT ALL HANG OUT," SO TO SPEAK, AND THEREFORE TO GIVE US ALL AN OPPORTUNITY TO APPRECIATE THE BREADTH OF THE VIEWS EXPRESSED TO THE COMMISSION. WE SHALL

NOTIFY PRESENTERS OF THE DATE, TIME AND PLACE AT WHICH THEY HAVE BEEN SCHEDULED BEFORE THE END OF JANUARY. IN APPORTIONING THE AMOUNT OF TIME ACCORDED TO EACH PRESENTER, OUR PRINCIPAL CRITERIA WILL BE THE RANGE AND DEPTH OF EACH WRITTEN SUBMISSION.

WE HAVE SET ASIDE THE ENTIRE WEEK OF FEBRUARY 16 THROUGH 20 FOR PHASE I PRESENTATIONS IN TORONTO. ANY OF A NUMBER OF ADDITIONAL DAYS WILL BE SCHEDULED FOR SUBSEQUENT HEARINGS ELSEWHERE IN ONTARIO; WE SHALL BE GUIDED IN OUR CHOICE OF LOCATIONS BY THE PLACE OF RESIDENCE OR BUSINESS OF THE PARTIES WHO HAVE MADE WRITTEN SUBMISSIONS. YET OTHER DAYS WILL BE SCHEDULED FOR FURTHER PHASE I HEARINGS IN TORONTO TO THE EXTENT THAT THESE ARE NECESSARY.

WHAT WE ARE CALLING PHASE II HEARINGS WILL BE SCHEDULED TO COMMENCE ONCE PHASE I HAS ENDED, POSSIBLY IN MAY AND PROBABLY IN JUNE. PHASE II HEARINGS WILL PROCEED IN THE FORMAL ATMOSPHERE THAT PERMITS THE EXAMINATION AND CROSS-EXAMINATION OF WITNESSES. I SHALL HAVE MORE TO SAY ON THE SELECTION OF WITNESSES IN A FEW MOMENTS.

IN PHASE III OF OUR HEARINGS, WE SHALL ONCE AGAIN CONDUCT OURSELVES INFORMALLY, THIS TIME TO PERMIT ALL WHO HAVE MADE WRITTEN SUBMISSIONS ON MATTERS OF WORKMEN'S COMPENSATION TO LET THEIR VIEWS BE KNOWN. IF NECESSARY, THIS WILL BE FOLLOWED BY A FOURTH AND FINAL PHASE AT WHICH WITNESSES IN THIS AREA MAY BE CALLED.

IN ALL PHASES OF OUR HEARINGS, WE SHALL ENDEAVOUR TO ENSURE THAT SUFFICIENT TIME HAS BEEN ALLOCATED TO VENTILATE ALL ISSUES AS FULLY AS POSSIBLE. SUBJECT TO THIS OVERRIDING GUIDELINE, OUR CURRENT HOPE IS TO COMPLETE ALL PHASES OF OUR HEARINGS BY THE END OF THE COMING SUMMER; THAT IS, BY SEPTEMBER OF 1981.

3. HOW WILL THE COMMISSION HANDLE APPLICATIONS FROM PARTIES WHO WISH TO HAVE FORMAL STANDING AT ITS HEARINGS? THIS COMMISSION WAS APPOINTED UNDER THE PROVISIONS OF THE PUBLIC INQUIRIES ACT, 1971. THE QUESTION OF FORMAL STANDING ARISES BY VIRTUE OF SECTION 5(1) OF THE ACT, WHICH STATES THE FOLLOWING:

5(1) A COMMISSION SHALL ACCORD TO ANY PERSON WHO SATISFIES IT THAT HE HAS A SUBSTANTIAL AND DIRECT INTEREST IN THE SUBJECT MATTER OF ITS INQUIRY AN OPPORTUNITY DURING THE INQUIRY TO GIVE EVIDENCE AND TO CALL AND EXAMINE OR TO CROSS-EXAMINE WITNESSES PERSONALLY OR BY HIS COUNSEL ON EVIDENCE RELEVANT TO HIS INTEREST.

WE DO NOT CONSIDER FORMAL STANDING TO BE MATERIAL TO PHASE I OR PHASE III OF OUR HEARINGS. ALL PERSONS WHOSE WRITTEN SUBMISSIONS HAVE MET OUR DEADLINES OF JANUARY 16, 1981 AND MAY 29, 1981 WILL HAVE AN OPPORTUNITY TO SPEAK TO THEIR SUBMISSIONS DURING THESE PHASES OF OUR HEARINGS. DURING THESE SAME PHASES, THERE WILL BE APPROPRIATE OPPORTUNITIES FOR ANY PERSONS TO ASK QUESTIONS OF THOSE WHO HAVE APPEARED TO SPEAK TO THEIR WRITTEN SUBMISSIONS.

THE QUESTION OF FORMAL STANDING IS THEREFORE MATERIAL ONLY TO PHASES II AND IV OF OUR HEARINGS. PARTIES WHO ARE GRANTED FORMAL STANDING WILL HAVE THE RIGHT TO CALL WITNESSES AND TO CONDUCT EXAMINATION AND CROSS-EXAMINATION. WE ASK THAT PARTIES WHO WISH TO SECURE FORMAL STANDING MAKE WRITTEN APPLICATION TO OUR LEGAL COUNSEL, MR. JOHN LASKIN, BY JANUARY 31, 1981. IN ALL INSTANCES, WE ASK THAT THE APPLICANTS INDICATE WHY THEY ARE SEEKING FORMAL STANDING AND IN WHAT PORTIONS OF OUR INQUIRY THEY BELIEVE THEY HAVE A SUBSTANTIAL AND DIRECT INTEREST. PARTIES WHOSE INTEREST IN SECURING FORMAL STANDING IS NOT APPARENT FROM THEIR WRITTEN APPLICATION WILL BE GIVEN AN OPPORTUNITY TO AMPLIFY THEIR CASE ORALLY AT A SPECIAL PUBLIC HEARING WHICH WILL BE CONVENED FOR THIS PURPOSE.

IN APPLYING FOR FORMAL STANDING, PARTIES ARE ASKED TO BEAR IN MIND THAT THE TERMS OF REFERENCE OF THIS COMMISSION EMBRACE ALL MATTERS RELATING TO HEALTH AND SAFETY ARISING FROM THE USE OF ASBESTOS IN ONTARIO, BUT DO NOT EXTEND TO INVESTIGATING INDIVIDUAL ALLEGATIONS OF WRONG-DOING. IT IS BECAUSE OUR TERMS DO NOT EXTEND TO SUCH INVESTIGATIONS THAT THE COMMISSION DOES NOT HAVE SO-CALLED PART III, THAT IS SEARCH AND SEIZURE POWERS, UNDER THE PUBLIC INQUIRIES ACT.

4. WHAT WILL BE THE COMMISSION'S APPROACH TO THE CALLING OF WITNESSES? PURSUANT TO PART II OF THE PUBLIC INQUIRIES ACT, THIS COMMISSION HAS THE POWER TO SUMMONS WITNESSES WHO ARE WITHIN ITS JURISDICTION, THAT IS WHO ARE RESIDENT IN ONTARIO. IT IS A MATTER OF FACT, HOWEVER, THAT MANY OF THE WITNESSES WHO HAVE THE EXPERTISE TO CONTRIBUTE MOST TO OUR WORK RESIDE IN OTHER JURISDICTIONS. WE SHALL SPARE NO EFFORT IN ENSURING THAT THE MOST INFORMED EXPERTS ON MATTERS OF HEALTH

AND SAFETY ARISING FROM THE USE OF ASBESTOS WILL VOLUNTARILY APPEAR BEFORE US. IN THAT PARTIES WHO HAVE FORMAL STANDING MAY BE OF ASSISTANCE TO US IN ENSURING THAT NO SOURCE OF EXPERTISE WILL BE OVERLOOKED, WE SHALL BE HAPPY TO JOIN THEM IN A CONCERTED APPROACH TO IDENTIFY EXPERT WITNESSES AND SOLICIT THEIR PARTICIPATION. OUR COUNSEL, MR. LASKIN, STANDS READY TO COLLABORATE FULLY IN THIS REGARD, AND WILL BE AVAILABLE TO LIAISE WITH ALL PARTIES AS SOON AS THEIR FORMAL STANDING HAS BEEN CONFIRMED.

GOOD LIAISON BETWEEN THIS COMMISSION AND PARTIES WHO ARE GRANTED FORMAL STANDING IS DESIRABLE NOT ONLY IN THE MATTER OF IDENTIFYING AND OBTAINING EXPERT WITNESSES BUT ALSO WITH RESPECT TO SCHEDULING THEIR APPEARANCES. TO THE MAXIMUM EXTENT POSSIBLE, WE MUST BE IN A POSITION WHERE WE CAN GIVE ALL WITNESSES FAIRLY PRECISE ADVANCE NOTICE OF THE AMOUNT OF TIME DURING WHICH THEY WILL BE INVITED TO STAND FOR EXAMINATION AND CROSS-EXAMINATION. IN THIS REGARD, PARTIES WHO HAVE FORMAL STANDING ARE ASKED TO SHARE WITH US AN IMPORTANT RESPONSIBILITY FOR THE SUCCESS OF OUR PHASE II AND PHASE IV HEARINGS.

5. WHAT IS THE COMMISSION'S POSITION ON PROVIDING FINANCIAL HELP TO PARTIES WHO MAY WISH TO APPLY FOR ASSISTANCE IN PREPARING THEIR SUBMISSIONS? AS MATTERS STAND, THIS COMMISSION IS NOT AUTHORIZED TO PROVIDE FINANCIAL HELP TO PARTIES WHO MAY NEED ASSISTANCE IN PREPARING THEIR SUBMISSIONS. TO SECURE SUCH AUTHORITY, AN AMENDMENT TO THE ORDER-IN-COUNCIL CREATING THE COMMISSION WOULD BE NECESSARY.

IT MAY WELL BE THAT THE RESOURCES AVAILABLE TO PARTIES WHO HAVE AN INTEREST IN THIS INQUIRY ARE SUCH AS TO OBTAIN ANY NEED FOR FINANCIAL ASSISTANCE IN THE PREPARATION OF SUBMISSIONS. WE FRANKLY DOUBT THAT INDUSTRIAL ASSOCIATIONS, LABOUR-MANAGEMENT GROUPS, FIRMS, UNIONS, OR PUBLIC AGENCIES COULD PLAUSIBLY ARGUE FOR SUCH ASSISTANCE. NONETHELESS, WE ARE PREPARED TO ENTERTAIN SERIOUS SUBMISSIONS FOR ASSISTANCE FROM APPROPRIATE PARTIES, IF SUCH ARE FORTHCOMING. SHOULD WE DEEM ANY SUCH SUBMISSIONS TO BE MERITORIOUS, WE SHALL NOT HESITATE TO APPLY FOR AN AMENDMENT TO OUR ORDER-IN-COUNCIL.

WE SHALL NECESSARILY EXERCISE A MEASURE OF DISCRETION IN DEVISING CRITERIA BY WHICH TO JUDGE ANY SUBMISSIONS WE MAY RECEIVE. HOWEVER, THE FOLLOWING CRITERIA, USED BY MR. JUSTICE HARTT IN HIS NORTHERN ENVIRONMENT INQUIRY, ILLUSTRATE SOME OF THE MAJOR POINTS WE WOULD HAVE IN MIND.

- THE APPLICANT FOR FUNDING SHOULD BE ONE WHO THE COMMISSION IS SATISFIED HAS A DIRECT AND SUBSTANTIAL INTEREST IN THE SUBJECT-MATTER OF THE INQUIRY ;
- IT SHOULD BE CLEAR TO THE COMMISSION THAT SEPARATE AND ADEQUATE REPRESENTATION OF THAT INTEREST WILL MAKE A NECESSARY AND SUBSTANTIAL CONTRIBUTION TO THE HEARING ;
- THOSE SEEKING ASSISTANCE SHOULD HAVE AN ESTABLISHED RECORD OF CONCERN FOR, AND SHOULD HAVE DEMONSTRATED THEIR OWN COMMITMENT TO, THE INTERESTS THEY SEEK TO REPRESENT ;
- IT SHOULD BE SHOWN TO THE SATISFACTION OF THE COMMISSION THAT THOSE SEEKING ASSISTANCE DO NOT HAVE

SUFFICIENT FINANCIAL RESOURCES TO ENABLE THEM TO REPRESENT ADEQUATELY THAT INTEREST IN THE HEARING UNDER CONSIDERATION, AND WILL REQUIRE THE ASSISTANCE TO ENABLE THEM TO DO SO;

- THOSE SEEKING ASSISTANCE SHOULD HAVE A CLEAR PROPOSAL AS TO THE USE THEY INTEND TO MAKE OF THE FUNDS, AND SHOULD BE WILLING TO MAKE A COMMITMENT TO ACCOUNT FOR THE FUNDS.

PARTIES WHO BELIEVE THEY CAN MEET THESE CRITERIA ARE URGED TO MAKE THEMSELVES KNOWN TO OUR LEGAL COUNSEL, MR. LASKIN, AS SOON AS POSSIBLE, AND IN ANY EVENT NO LATER THAN JANUARY 31.

6. HOW DOES THE COMMISSION'S WORK RELATE TO THE ONGOING INITIATIVES OF THE GOVERNMENT OF ONTARIO IN THE REALM OF ASBESTOS CONTROL AND REGULATION? WHEN HE ANNOUNCED THE APPOINTMENT OF THIS COMMISSION ON APRIL 21, 1980, THE MINISTER OF LABOUR MADE THE FOLLOWING STATEMENT TO THE LEGISLATIVE ASSEMBLY:

MR. SPEAKER, THE COMMISSION'S APPOINTMENT DOES NOT MEAN THAT OUR OTHER ACTIVITIES WILL BE SUSPENDED OR OTHERWISE DELAYED. WE SHALL CONTINUE WITH THE SCHOOL INSPECTION PROGRAMME, WITH THE MONITORING OF THE T.T.C. SUBWAY SYSTEM, WITH OUR INSPECTION PROGRAMME AIMED AT LOCATING ASBESTOS EXPOSURE SITES, WITH OUR ANALYSIS OF SUBMISSIONS MADE CONCERNING THE PROPOSED OCCUPATIONAL STANDARDS FOR ASBESTOS, AND GENERALLY WITH THE WORK OF THE INTERMINISTERIAL TASK FORCE TO WHICH I HAVE REFERRED. INDEED, IF FURTHER

IMMEDIATE ACTION OF A REMEDIAL NATURE APPEARS TO BE WARRANTED, WE WILL NOT HESITATE TO ACT SIMPLY BECAUSE A COMMISSION HAS BEEN APPOINTED TO CONDUCT A THOROUGH STUDY OF THE ENTIRE SUBJECT.

THIS STATEMENT MAKES THE DIVISION OF LABOUR BETWEEN THIS COMMISSION AND THE GOVERNMENT SIMPLE AND STRAIGHTFORWARD. IT IS OUR RESPONSIBILITY TO MAKE A THOROUGH STUDY OF THE SUBJECT AND TO FORMULATE ANY AND ALL RECOMMENDATIONS THAT WE DEEM WARRANTED. WHILE WE SHOULDER THIS RESPONSIBILITY, OUR RELATIONSHIP TO THE GOVERNMENT WITH RESPECT TO ANY INITIATIVES WHICH IT WISHES TO PURSUE WILL BE ABSOLUTELY AT ARM'S LENGTH. THE GOVERNMENT ACCEPTS ITS OWN RESPONSIBILITY TO SERVE THE PUBLIC INTEREST ON A DAY-TO-DAY BASIS; OUR RESPONSIBILITY IS TO PRODUCE RECOMMENDATIONS THAT WILL ASSIST GOVERNMENT IN SERVING THE PUBLIC INTEREST IN THE LONGER RUN. IF IT IS OUR JUDGEMENT, WE SHALL NOT HESITATE TO TAKE ISSUE EITHER WITH WHAT GOVERNMENT HAS DONE OR WITH WHAT HAS BEEN LEFT UNDONE. IN THE MEANTIME, THE GOVERNMENT'S INITIATIVES ARE ENTIRELY ITS OWN.

TO ILLUSTRATE BY WAY OF A SPECIFIC EXAMPLE, THE GOVERNMENT IS NOW RECEIVING SUBMISSIONS ON A PROPOSED REGULATION COVERING STANDARDS OF EXPOSURE TO ASBESTOS FIBRES. THIS REGULATION MAY OR MAY NOT BE PROMULGATED IN THE NEAR FUTURE. IT IS NOT OUR JOB TO BECOME INVOLVED IN THIS INITIATIVE. ON THE OTHER HAND, WE SHALL NOT HESITATE TO FORMULATE SPECIFIC RECOMMENDATIONS WITH RESPECT TO ASBESTOS STANDARDS IF WE CONSIDER THE GUIDELINES

OR REGULATIONS THAT RESULT FROM PRESENT INITIATIVES TO BE TOO LAX OR TOO STRINGENT.

BY THE TERMS OF OUR ORDER-IN-COUNCIL, WE ARE ENSURED THE CO-OPERATION OF ALL PUBLIC AGENCIES IN OUR WORK. WE SHALL TAKE FULL ADVANTAGE OF THE RESULTING ACCESS THAT WE GAIN TO: (1) SUBMISSIONS ADDRESSED TO GOVERNMENT AGENCIES; (2) THE EXPERTISE THAT IS AVAILABLE IN THESE AGENCIES; AND (3) THE EXPERIENCE THAT AGENCIES HAVE ACQUIRED IN MATTERS OF IMPLEMENTATION. I REPEAT, HOWEVER, THAT OUR RELATIONS WITH THE GOVERNMENT AND ALL ITS AGENCIES WILL BE AT ARM'S LENGTH.

7. WHAT IS THE COMMISSION'S OUTLOOK WITH RESPECT TO THE TIMING OF ITS ACTIVITIES? AS I HAVE ALREADY INDICATED, OUR CURRENT HOPE IS THAT WE CAN COMPLETE ALL PUBLIC HEARINGS BY THE END OF THE COMING SUMMER. WE BELIEVE THAT THIS HOPE IS REALISTIC, BUT WE WILL BE READY TO EXTEND THIS TIMEFRAME IF THE NEED BECOMES APPARENT. WE WISH TO ENSURE THAT ALL ISSUES HAVE BEEN CANVASSED FULLY AND OPENLY. UNDER THE PUBLIC INQUIRIES ACT, THIS IS WHAT A ROYAL COMMISSION IS FOR.

IT IS THEREFORE IDLE TO PRETEND THAT THE ROYAL COMMISSION IS OTHER THAN TIME-CONSUMING. ISSUES REQUIRING IMMEDIATE RESOLUTION ARE FOR ELECTED DECISION-MAKERS TO HANDLE. THEY ARE NOT FOR COMMISSIONERS APPOINTED TO ADVISE DECISION-MAKERS ON THE BASIS OF STUDY AND PUBLIC PARTICIPATION. THE VERY CREDIBILITY OF COMMISSIONERS' RECOMMENDATIONS HINGES ON THE EXTENT TO WHICH THEY ARE THE PRODUCT OF BROAD PUBLIC INPUT AND STUDIED REFLECTION. AT PRESENT, OUR BEST ESTIMATE IS THAT WE

SHALL HAVE COMPLETED OUR WORK ONE YEAR AFTER OUR HEARINGS END; THAT IS TO SAY, IN THE LATE SUMMER OF 1982. THIS IS A LONG TIME FROM NOW. AND YET, I KNOW FROM PERSONAL EXPERIENCE WITH OTHER COMMISSIONS THAT IT MAY NOT PROVE TO BE LONG ENOUGH. IF THE LATTER PROVES TO BE THE CASE, I SHALL, HAVING SHARED OUR SELF-IMPOSED DEADLINE WITH YOU TODAY, EAT MY WORDS WHEN THE TIME COMES. BUT LET ME ASSURE YOU THAT WE SHALL DO ALL IN OUR POWER TO MEET THIS DEADLINE.

ALTHOUGH WE ENVISAGE THAT OUR TASK WILL NOT BE COMPLETED UNTIL WELL INTO 1982, WE DO NOT FEEL BOUND TO WITHHOLD ALL OUR VIEWS AND RECOMMENDATIONS UNTIL A FINAL REPORT IS READY. IT MAY BE THAT CERTAIN ISSUES ARE SUFFICIENTLY SEPARATE FROM OTHERS THAT THEY COULD BE ADDRESSED IN INTERIM REPORTS. SUCH ISSUES, IF THEY ARE PRESSING, AND IF THEY HAVE BEEN VENTILATED TO THE SATISFACTION OF ALL INTERESTED PARTIES IN ONE OR ANOTHER PHASE OF OUR HEARINGS, MIGHT APPROPRIATELY BE ADDRESSED BY US THROUGH ONE OR MORE INTERIM REPORTS. IF WE RECEIVE SUBMISSIONS TO THE EFFECT THAT CERTAIN ISSUES MIGHT BE ACCORDED A DEGREE OF PRIORITY IN OUR TIMETABLE, WE SHALL CONSIDER THEM SERIOUSLY.

INTERIM REPORTS, THEN, MAY HAVE AN APPROPRIATE PLACE IN THE TIMING OF OUR ACTIVITIES. WE SHALL ALSO ISSUE SUCH RESEARCH STUDIES AS MAY HAVE BEEN COMPLETED BEFORE OUR FINAL REPORT IS PRINTED. ALL STUDIES CONDUCTED UNDER OUR AUSPICES, WHATEVER

THE TIME OF THEIR COMPLETION, WILL FIND THEIR WAY INTO THE PUBLIC DOMAIN, EITHER AS PUBLICATIONS OR AS PART OF THE COMMISSION'S ARCHIVES. OUR DIRECTOR OF RESEARCH, DR. DONALD DEWEES, IS ACTIVELY CONSULTING EXPERTS FROM AROUND THE WORLD TO ASCERTAIN WHAT HAS ALREADY BEEN DONE, AND WHERE OUR RESEARCH PRIORITIES MIGHT LIE. BEFORE WE FLESH OUT OUR RESEARCH DESIGN, WE WISH AS WELL TO HAVE THE BENEFIT OF THE VIEWS THAT WILL BE ADDRESSED TO US IN THE WRITTEN SUBMISSIONS.

LADIES AND GENTLEMEN, THIS CONCLUDES MY PRESENTATION OF THE GENERAL PROCEDURES THAT THIS COMMISSION INTENDS TO FOLLOW. I HAVE MENTIONED A NUMBER OF STEPS AND DATES THAT ARE EXTREMELY PERTINENT TO THE CONDUCT AND TIMING OF OUR ACTIVITIES. FOR THIS REASON, COPIES OF THIS ADDRESS WILL BE DISTRIBUTED TO ALL INDIVIDUALS ON OUR MAILING LIST; IN ADDITION, YOU WHO ARE IN ATTENDANCE TODAY MAY PICK UP COPIES OF THIS ADDRESS AT THE DISPLAY TABLE DURING THE COFFEE BREAK, I NOW WELCOME YOUR QUESTIONS.

PERMIT ME TO CLOSE WITH AN ANNOUNCEMENT CONCERNING THE IMMEDIATE COMING EVENT ON OUR SCHEDULE. THE SECOND PUBLIC MEETING OF THIS COMMISSION WILL BE ON FRIDAY, DECEMBER 12 IN THE O.I.S.E. AUDITORIUM, COMMENCING AT 9:30 A.M. AT THIS MEETING, INVITED EXPERTS WILL SITUATE THE SUBJECT OF ASBESTOS IN THE CONTEXT OF GENERAL ISSUES THAT ARISE WITH RESPECT TO (1) PROBLEMS OF MEASUREMENT; (2) THE QUALITY OF SCIENTIFIC EVIDENCE; (3) THE DOSE-RESPONSE CONCEPT AND (4) FRAMEWORKS FOR THE REGULATION OF HAZARDOUS SUBSTANCES.

Following Dr. Dupré's address there was a question period.

Mr. Eddy Cauchi, an ex-employee of Johns-Manville Canada, Inc., asked Dr. Dupré if the Commission's terms of reference could be extended so as to encompass certain matters which had been contained in a 1977 submission to the Ministry of Labour by a group of employees, former employees, and widows of deceased workers of Johns-Manville Canada. The submission suggested that an inquiry be made into the asbestos industry in Ontario in order to address such questions as:

- (1) Why management should not be held negligent for not informing workers of the dangers of working with asbestos.
- (2) Did workers receive proper reports in regard to their health when physical checks were done by the company doctor?
- (3) Was the Occupational Health Department, that is responsible for keeping an eye on us workers, passing on to us any changes observed when x-ray and pulmonary function tests were taken?
- (4) Is the Workmen's Compensation Board (WCB) treating the disabled workers who are affected by asbestos in a fair and equitable manner?

Mr. Cauchi asked Dr. Dupré if the Royal Commission on Asbestos has the powers to address these matters, or if it would need an extension of its terms of reference in order to look into them.

Dr. Dupré said that, as a general rule, any change or addition to the terms of reference for a commission of inquiry must be done by order of the Lieutenant Governor in Council. However, he said, "my preliminary judgement would be that our terms of reference do get us into the matters that you have mentioned." He added that the whole question of the workmen's compensation system gets right down to fundamental points such as whether a workmen's compensation system, which is traditionally oriented towards compensating for industrial accidents, is a suitable system for compensating victims of industrial disease?

Dr. Dupré said that "any commission with terms of reference such as ours, which involves a hazardous substance that has been associated with industrial disease, would necessarily wish to examine very carefully such questions as the adequacy and efficacy of labour-management committees; of exchanges of information between management and unions; indeed, of a sharing of information among public agencies, unions, and management."

Mr. Jack Bird of the Canadian Union of Public Employees said, "to a large extent this commission of inquiry was precipitated by the death of one of our members, of asbestosis, in the Scarborough Board of Education." He asked if the Commission could facilitate their acquiring information from individual school boards on the depth of the asbestos problem in their schools, and assist them in obtaining an autopsy and inquest report on the death of Clifton Grant, at a more reasonable cost than they would have to pay.

Dr. Dupré answered that because public agencies have been asked to co-operate with the Commission, it could possibly be of assistance in obtaining the schools information through the Ministry of Education. He asked Mr. Bird to refer the autopsy and inquest information request to Commission Counsel, Mr. John I. Laskin.

Dr. J. Sullivan, Director of the Occupational Health and Safety Resource Centre at the University of Western Ontario, addressed the floor microphone next. He said that as his Centre advises people in schools, hospitals, and other buildings on asbestos problems, he is concerned with the inability of experts from the government and academic sectors to provide answers on safe levels of asbestos. It is only possible to report results of tests as "below certain figures," not as "safe or unsafe," he said. He asked if the Commission intended to conduct, sponsor, or fund studies of its own which might provide some of the answers needed.

Dr. Dupré replied that the Commission's mandate does allow for such studies, and he urged people with ideas on research or information on people who might be good at conducting research to talk with the Commission's Director of Research, Dr. Donald N. Dewees.

The Chairman noted that the Commission would try to work on as current a knowledge base as possible, but "I think we would be fooling ourselves if we tried to pretend that we will have a fully adequate knowledge base on the subject matter by the time we are ready to file our report." One of the questions demanding attention is "how to equip government to respond quickly to changes in our knowledge base as it develops over time." He added, "... the fundamentally philosophical question... what kind of criteria should public authorities be conscious of when they are devising policies that involve the question of preventable deaths, is a profoundly difficult question we have to face."

Mr. Colin Lambert, Special Assignment Officer, Canadian Union of Public Employees, asked who is responsible for paying witnesses called by an organization with formal standing.

Mr. John Laskin, the Commission's Legal Counsel, explained briefly the procedures for funding, and referred Mr. Lambert to Dr. Dupré's earlier comments on this subject.

Mr. Lambert asked if the Commission would be willing to travel to hear witnesses.

Dr. Dupré referred to information in his address on this subject and added that the Commission was definitely prepared to hold hearings in various locations across Ontario which will be determined by the geographical sources of interest in the Commission's hearings process.

Ms. Christine Mitchell, a lawyer from Toronto, asked if the Commission intended to look at the issue of civil liability in relation to asbestos matters, specifically with respect to limitation periods.

Dr. Dupré said that nothing in the Commission's terms of reference precludes examination of that subject.

Ms. Mitchell asked if the Commission would initiate its own investigation of areas not covered by submitted briefs.

Dr. Dupré referred her to the Royal Commission on Asbestos brochure which outlines some of the issues which are before the Commission. He added that "... we are proceeding carefully with the development of our own research programme ... and can pursue matters that are either not raised or are inadequately raised..."

Mr. Charles Neilson, the former President of Local 26 of the Energy and Chemical Workers Union at Johns-Manville Canada, Inc., addressed the Chairman next. He discussed several aspects of the asbestos problem. He said, "Surely you people can get enough information from all the commissions that have been done all over the world... there's been a total war going on at Johns-Manville for years now, 10 to 15 years, between the union, the Workmen's Compensation Board, and the company... it's very difficult for us to present our own case time after time... I'm hoping that its on your agenda... to call a meeting of all the people who have been disabled by Johns-Manville or companies like it... that you're going to clear their expenses for coming down here, because these people have been getting their savings drained for years through the system which is just absolutely rotten; and I think that you have the money to do that... I must have given up thousands of dollars myself for the same thing."

Mr. Neilson spoke of difficulties encountered in attempting to get workers benefits from the Workmen's Compensation Board and the problems of "fighting a company like Johns-Manville, year after year... very clever people who have been shafting us for years... we've lost up to 50 or 60 people, killed by Johns-Manville... for money... the biggest disease we have is greed... I'm wondering if your Commission is too late."

He noted that WCB rehabilitation programmes which were designed for disabled workers "fell through"; and he said some workers had to go on welfare. Referring to the "great to-do" about asbestos in schools he said, "I'm wondering where the hell everybody has been for the last 10 to 15 years... what about the guys who are with [asbestosis]...the guys who have died... the guys who are disabled..."

Referring to those who couldn't get compensation for diseases he said, "They sell their house; or the wife has to go to work; at the age of 50 or 60, a widow has to go out and work... I think it's about time the government or somebody pays the shot for us to give you the information, because there are a lot of people down at Johns-Manville who are quite willing to talk to you... but they can't afford a day off work."

Mr. Neilson also suggested that meetings be held on evenings or weekends in order to give workers a chance to appear without having to take a day off work.

Dr. Dupré assured Mr. Neilson that the Commission's regular public hearings would include evening and Saturday sessions. He commented, "You wonder whether... this Commission is too late. And I think that one of the burdens we all bear is that commissions of inquiry that are spawned by matters that involve human tragedy are, by definition, almost bound to be too late... My colleagues and I appreciate very much the extent to which there is an individual human tragedy background, for some Canadians and others... some who are no longer with us, to an inquiry such as this."

Dr. Dupré said that there could very well be some issues which could become the subject of an interim report by the Commission. He also explained that a royal commission is, for better or worse, a body that operates under a very specific piece of legislation; that is, The Public Inquiries Act, 1971. "We are very eager indeed to canvass all the issues in the open... we must ensure that all parties are able to appreciate the depth and range and sometimes the agony of the problems that are before us... I certainly appreciate the kinds of problems which

I am sure beset you, and other parties for that matter, with respect to the whole area of compensation for industrial disease victims... I consider the whole of the structure and policy with which public authorities will try to deal with this subject to be very much within our terms of reference."

Mrs. Odette Dodds is the widow of John Dodds, a Johns-Manville Canada worker who died in 1978. She related how her husband, after 23 years with the company, died of industrial disease, and six months later she was informed by the Workmen's Compensation Board that her husband's death was not compensable. She appealed to Charles Neilson, then the President of the Energy and Chemical Workers Union, for help in acquiring a pension. Mrs. Dodds commented: "No one ever told us asbestos causes asbestosis and many other industrial diseases. Johns-Manville never cared about the health and protection of the workers and their families. They only care about two things: money and production."

She said that after living on her own savings for 26 months she received a letter in August of this year informing her that her husband's death was compensable because not only did he have asbestosis, but other asbestos-related diseases, silicosis, and cancer.

Mrs. Dodds described the hardship of their lives from the time her husband's illness forced him to retire in 1974 and the company did not give him sick benefits. He had paid unemployment insurance for 24 years, but was refused payment; he could get nothing from the Canada Pension Plan programme, their OHIP coverage was cut off; and she had to work from 10 to 20 hours a day, "to keep my husband alive."

"We were cut off everything. My husband emigrated to this country in 1951... never drew sick benefits; no unemployment insurance; no welfare; no Canada pension. His honesty destroyed him... and most of our close friends and neighbours also worked at the plant, and they are all dead now. And since my husband passed away we have lost, in 25 months, 25 other Johns-Manville workers... and it's hard to believe that it is 1980, and it's happening in this country."

Dr. Dupré repeated his previous comment that there is a background of true tragedy to inquiries such as this one and said, "I deem it my duty to of course go forward to do all we can to set matters in a more equitable and straightforward way than may have been the case up until now."

Dr. Dave Verma of the Occupational Health Programme at McMaster University spoke also on behalf of the Ontario Section of the American Industrial Hygiene Association. Commenting on the little knowledge we have on asbestos in indoor environments, its affect on workers involved in construction of these buildings, and its effect on children, he asked if the Commission had set any priorities for looking at these areas.

Dr. Dupré replied that the Commission had not yet set firm priorities for research and was therefore in a position to respond to suggestions on this.

Mr. Ray Sentes, Health and Safety Director of the Alberta Federation of Labour, was previously the Health and Safety Director of the Insulators and Asbestos Workers Union in Alberta. He asked if a citizen of Alberta could obtain formal standing, and if funding could be provided for organizations to pay the expenses of witnesses they wished to call.

Dr. Dupré answered that parties granted formal standing will be asked to give their full co-operation to the Commission in the calling of witnesses. Some witnesses will be called by the Commission itself and, since they are available for cross-examination as well as examination, all parties will have access to those called by others. He added that a party may apply to the Commission for funding the expenses of a witnesses, or the Commission may call that witness itself.

The Chairman added that, "Obviously, it is not in the interest of this inquiry to have a situation where a witness who might have a substantial contribution to make to this work would be precluded from appearing through lack of funding."

On the question of people from outside the province securing formal standing, Dr. Dupré said residing outside this province should not be considered a barrier. He referred Mr. Sentes to Commission Counsel John Laskin on this subject.

3. Address by Dr. Gordon Atherley, President, Canadian Centre for Occupational Health and Safety, on "A Survey of Four Studies on the Health Effects of Asbestos"

In the second part of the day's agenda, Commissioner Dr. J. Fraser Mustard introduced Dr. Gordon Atherley, President of the Canadian Centre for Occupational Health and Safety (CCOHS). The Centre was established by federal legislation passed in April, 1978. The purpose of this Centre is to promote, through joint planning, and the dissemination of information, the physical and mental well-being of Canadians at work. It carries out projects of review, research and inquiry. It also undertakes to provide the Canadian community with a better understanding of the effects on people, of work and work environments in their beneficial as well as their harmful qualities. The Centre's Board of Governors comprises representatives of government, labour, and management.

Dr. Atherley's immediate past appointment was that of the Chief Occupational Medical Officer for the Saskatchewan Department of Labour. Other recent past appointments include Head of the University of Toronto's Occupational and Environmental Health Unit, and Chief of Occupational Health and Safety Programmes at the University of Aston, Birmingham, England.

Dr. Atherley's address to the first public meeting of the Royal Commission on Asbestos concerned the health effects of asbestos as those effects have been reported in four recent studies on the subject.

Dr. Mustard explained that as it was important that the Commission obtain as thorough reports as possible on the subject of their study, they asked the CCOHS to review these studies and report on how each responded to nine specific questions which were put to the Centre by the Royal Commission on Asbestos regarding the health effects of asbestos.

The four studies are:

- (a) The Final Report of the United Kingdom Advisory Committee on Asbestos, 1979 (referred to hereinafter as "the U.K. report")
- (b) The Report entitled "Effects of Asbestos in the Canadian Environment" from the Associate Committee on Scientific Criteria for Environmental Quality of the National Research Council of Canada, 1979 (referred to hereinafter as "the NRCC report")
- (c) The Report entitled "Workplace Exposure to Asbestos" commissioned by the United States National Institute for Occupational Safety and Health and the Occupational Safety and Health Administration, 1980 (referred to hereinafter as "the NIOSH-OSHA report")
- (d) The Report entitled "Public Health Risks of Exposure to Asbestos" by a working group of experts established by the Commission of the European Communities, 1977 (referred to hereinafter as "the CEC report")

Dr. Atherley commenced his address using slides for illustration. He gave answers to the nine questions put to CCOHS by the Commission; answers which "relate specifically and exclusively to the four reports" referred to above. These reports, he said, "represent a synopsis of the knowledge, particularly the scientific knowledge, already available in relation to asbestos and health problems from asbestos."

Dr. Atherley said that the CCOHS will make its own views known to the Commission at a later date.

Dr. Atherley answered each of the questions as he presented them.

- (1) What are the adverse effects on health that are caused by exposure to asbestos?

The diseases the reports agree are associated with asbestos, a fibrous mineral, are:

- (a) asbestosis: characterized by thickening of the pleural membranes (covering the lungs) and by fibrosis (extensive growth of scar tissue that shrinks and tears surrounding tissue).
- (b) mesothelioma: a malignant tumor of the chest or abdominal lining.
- (c) cancer of the lungs, larynx, and gastrointestinal tract (stomach and intestines).

Other asbestos-related conditions include:

- (a) asbestos bodies: small particles more correctly called ferruginous bodies. In and of themselves, they do not indicate disease, but rather exposure to asbestos.
- (b) asbestos warts: harmless skin growths that occur when asbestos fibres penetrate skin.
- (c) pleural plaques: white, glistening raised areas of fibrous tissue, on the lining of the chest, which may calcify or harden. They are also evidence of asbestos exposure.

- (2) What is the rate of occurrence of these health effects in those who work with asbestos and in the general public?

For occupational groups, it has been possible to rank the various asbestos-related diseases which cause death. The U.K. report included results of studies of asbestos workers such as insulators, shipyard workers, asbestos miners, and asbestos production workers and found excess mortality among them was accounted for, in order of importance, by: lung cancer, asbestosis, mesothelioma, and gastrointestinal cancer. Asbestosis was found only in groups with long-term exposure to asbestos dust in occupational and para-occupational exposure (as in the neighborhood of mines).

In the many reports on the percentage of total mortality among occupational groups due to asbestos, figures vary from 1.3 to 11 percent. The U.K. report mentions an annual incidence rate (rate of occurrence of new cases) of certified asbestosis, at a lifetime exposure of 2 fibres per ml. (the prevailing standard of acceptable exposure in Britain as well as in most of North America), as 0.5 percent.

The reports generally indicate that asbestosis has rarely been found in the general population and is not considered a public health risk.

- (3) Do the major types of asbestos differ in their toxicity, and if so, how?

This topic is highly controversial. There are several different types of asbestos of commercial importance, including:

- (a) chrysotile: ("white asbestos") curly, belonging to the group called serpentine
- (b) the amphiboles: crocidolite ("blue") which does not occur naturally in Canada, and amosite ("brown"), both of which are straight in form.

The fact that asbestos is often a mixture of different types complicates the interpretation of scientific evidence.

The controversy centres on the question of whether crocidolite is more dangerous than chrysotile. In Europe, the view is that blue asbestos has greater risk of causing mesothelioma than the white asbestos. In the U.S. and much of North America, the view is that all forms of asbestos are capable, though perhaps to a different degree, of causing mesothelioma, and that, therefore, all are equally dangerous.

- (4) What is the shape of the dose-response relation? Is it linear or some other shape?

Dose refers to the total amount of asbestos received. Response refers to the proportion of a population exposed to asbestos, which develops disease such as asbestosis or mesothelioma.

The main shape of graphs that depict dose-response relation are the linear (straight line) and the S-shape. The linear shape occurs when for any dose there will be some response. The S-shape appears when for certain doses the response is zero and a safe level of dosage may exist below a certain point -- a threshold.

All of the reports agree that the most likely dose-response relation is linear; and that there is no such thing as an S-shaped graph of that relation.

(5) Is there a safe threshold for exposure to asbestos?

As the reports agree that the dose-response relation is likely linear, they agree there can be no safe threshold.

(6) How does the health risk relate to the age of the exposed person? How is it affected by other factors such as smoking?

There is little evidence on the age factor in the four studies. There are no clearcut answers because of a lack of knowledge on latency periods (periods from the time of exposure to the development of a disease).

In regard to other factors, the studies show lung cancer seems to be favoured by a combination of cigarette smoking and asbestos exposure. Smoking was found to have little effect on asbestosis or on mesothelioma.

Dr. Atherley illustrated latency periods in disease by relating the case of women workers who, from 1940 to 1944, during World War II, worked in Ottawa and in Nottingham, England, assembling gas masks. This involved their handling crocidolite (blue asbestos) used to sandwich a chemical filter in the masks. In the 1960's and 1970's, these women began dying of mesothelioma-- 20 to 30 years after exposure to the asbestos.

According to the studies, the influence of the pattern of exposure, how one receives the dose of asbestos (all at once or over a period of years) is not yet understood.

(7) What is the magnitude of the health risk from asbestos for asbestos workers?

The U.K. report gave figures (re deaths caused by asbestos-related diseases):

lung cancer	40%
asbestosis	24%
mesothelioma	13%
gastrointestinal cancer	8%
all other causes	15%

The incidence of mesothelioma in occupationally exposed populations has been estimated to range from two to ninety times higher than that in the general unexposed population.

The reports note that several factors complicate interpretation of data: latency periods; the measurement devices used; lack of uniformity in physicians' diagnoses; etc.

(8) What is the magnitude of the health risk from asbestos for the general population excluding asbestos workers and those who live in the immediate vicinity of asbestos mines or mills?

From the reports, it is clear that the magnitude of the risk of disease from asbestos for the general population is not known. There have been occurrences of disease in para-occupational (such as in members of asbestos workers' families) and neighborhood exposures.

According to the U.K. report, extrapolation from the industrial data for asbestos disease to the public is not possible. Dr. Atherley said that there

has been no general reporting of asbestosis in the public, and this may suggest that there is a threshold below which asbestosis is not detectable.

(9) What was the chronology of understanding the health risks of asbestos exposure by the health researchers?

Dr. Atherley related some of the historical highlights.

Asbestos has been used for a long time. As early as the 1st century AD, the Greek geographer Strabo reported that slaves who wove asbestos into prized robes and burial garments for nobility suffered from a "breathing sickness." In 12th century Europe, Charlemagne's banquet guests were treated to amazing displays of fire-defying tricks performed with asbestos cloths. Now, eight hundred years later, it is harder to be innocently enchanted with the usual powers of what was once called "the magic mineral."

For over a century asbestos has been mined and processed for hundreds of different industrial uses. When workers handling the mineral developed fatal illnesses in the early years of this century, factory inspectors and medical doctors began to make the connection between asbestos dust and disease. Asbestos factory owners were among the first to realize the danger. Henry Ward Johns, founder of what became the Johns-Manville Corporation, died of asbestosis in 1898.

As early as 1907, at least one French factory inspector and one British medical doctor were convinced that asbestos was the cause of death for certain textile workers. Twenty years later another British doctor recognized that disease produced by working in asbestos dust created a previously unknown type of lung fibrosis -- he labelled it "asbestosis."

In the early 1930's, it was found that asbestos-related disease could strike many factory workers, not just the unfortunate few -- as many as one-third of the workers in a British plant were affected. At the same time doctors at an American clinic found, during autopsy, that a death apparently due to heart failure was actually due to the suffocating effects of asbestos dust.

In 1931, it was known that an exposure period as short as nine months could produce an asbestotic condition. People who used asbestos products - pipecoverers, boiler maintenance men and even a clerical worker - developed asbestosis; it was not limited to factory employees only. That asbestosis and lung cancer could occur together in the same victim was known by 1934; several cases were reported by British and American researchers in the mid 1930's. During this decade, confusion over the diagnosis of tuberculosis in the asbestos-producing region of Quebec became an issue.

By the late 1930's and the early 1940's, researchers were preoccupied with questions about the link between lung cancer and asbestos exposure. Attempts to induce cancers experimentally in mice were not conclusive. Numerous cases of asbestosis and lung cancers occurring together had been documented by the mid 1940's by American, British and German investigators. A consensus of the existence of a causal relationship between asbestosis and lung cancer was apparently reached by 1949 after a landmark study of British asbestosis victims who reported for compensation. American researchers in the 1950's, however, found reasons to conclude that asbestos was not responsible for causing lung tumors.

A major study of English textile employees in the mid 1950's was widely recognized as offering the most solid evidence to date that asbestos-exposed workers ran a high risk of being afflicted with lung cancer as well as asbestosis.

Epidemiology, a type of quantitative analysis of disease distribution and causation, became increasingly popular as a research tool in the 1950's; studies which did not include study populations or numbers of victims considered to be statistically large enough were discredited. In fact the previously accepted connection between lung cancer and asbestos exposure was refuted in 1961 by prominent American epidemiologists.

Some evidence appeared irrefutable, however. It became generally known by the mid 1960's, for example, that insulation work with asbestos was especially dangerous, and that it caused high excess death rates and gastrointestinal cancer rates -- this from studies in Denmark and the United States. By 1965, it was known that people could develop early signs of lung disease from asbestos air pollution simply because they lived in the neighbourhood of an asbestos mine, and that both adults and children could become victims of mesothelioma from contact with occupationally-exposed family members.

A subject for investigation in the late 1960's and early 1970's was the question whether or not abnormalities on an x-ray film could signal the presence of asbestos-related disease - some researchers uncovered disease where X-ray evidence revealed none. Nevertheless, examination of x-ray abnormalities by industrial personnel in a British factory formed the basis in 1968 for the later universally-applied 2 fibre per cubic centimetre of air, or 2 million fibres per cubic metre of air, standard of asbestos exposure.

Research on asbestos in the 1970's became more intensive; knowledge about exposure measurement and the nature of asbestos-related disease more precise.

This concluded Dr. Atherley's formal presentation. There followed a question period.

Mr. Lionel Piuze, technical advisor to the Quebec Asbestos Mining Association, said he considered it his duty as a Canadian to defend one of the most important minerals produced and processed in Canada, which ranks at the same level as uranium and potash. He said he has worked with asbestos for over 40 years, as a primary producer; as Chairman of the Environmental Control Committee of the Quebec Asbestos Mining Association; representative of Canada on the Asbestos International Association; and member of the Executive Committee and an active participant in the Beaudry Commission in Quebec (i.e., Comité d'étude sur la salubrité dans l'industrie de l'amiante) in 1975-1976. He said his years of experience lead him to believe that existing criticism of asbestos as a health hazard is related to the period preceding 1960, before the presence of excessive asbestos dust in the air over a long period of time became scientifically and medically documented as a possible health hazard, and before adequate protective equipment was available.

"In the last two decades, major improvements have been made in the asbestos industry and, at present, the most sophisticated equipment used in modern plants and the efficient training of operators has not made it possible to attain a time-weighted average of one fibre per cubic centimetre. On the other hand, scientific epidemiological surveys have also shown that with a dust concentration averaging two fibres per cubic centimetre, the health of the workers is well-protected."

Dr. Michel Lesage is a medical consultant in occupational health and a medical advisor to the Quebec Asbestos Mining Association; a member of the medical advisory panel of the Asbestos International Association; and a governor and member of the Executive Committee of the Canadian Centre for Occupational Health and Safety. He referred to a recent study on effects of asbestos dust, which proves it is almost impossible to establish an increase in the risk

of lung cancer for workers exposed continuously over 20 years to 20 fibres per cubic centimetre of asbestos. He quoted from an editorial in the British Journal of Industrial Medicine"... it is all the more so at 2 fibres/cc... according to the present medical knowledge, at this level of 2 fibres/cc, it is extremely doubtful that asbestosis could occur."

He cautioned the Commission against "the tendency of certain persons in the general public, in the news media, and even in certain scientific circles, to accept as truth statements that are strictly hypotheses ... the use of animal tests for labelling substances dangerous to man and the application of mathematical extrapolation theory to biological reality... If the final evaluation in terms of life is diseases or death for the asbestos workers, then we have to ban the production of the asbestos fibre... I am personally convinced that a level of 2 fibres/cc or less is adequate to prevent any detectable increase in incidence of asbestos-related disease for the workers and so much more for the general population."

Dr. J. Sullivan of the Occupational Health and Safety Resource Centre at the University of Western Ontario asked the reason for the toxic effects of asbestos and whether or not, if they are a result of the shape and dimensions of fibres, he should be advising people about the tiny glass fibres found in many of the material samples tested in his lab?

Dr. Atherley said that the scientific community regards the toxic effects of asbestos to be related to the shape and structure of the fibre rather than its chemistry. He added that there is a theory that mesothelioma, which occurs not only in the chest but also in the abdomen, is caused by straight fibres penetrating lung tissue, crossing the diaphragm, and setting up disease in the lining underneath it. If that theory is right, obviously all other minerals or fibrous materials capable of producing fibres of the same critical dimensions as those of asbestos must then come under question. "That may well be one of the questions the Commission might have to look at."

Mr. Fred Gallop, a former employee of Johns-Manville Canada, asked if measurements of asbestos levels have been carried out in ambient air in areas remote from the commercial, manufacturing, production and milling of asbestos.

Dr. Atherley said that measurements have been done in city air, which showed varying degrees of asbestos contamination; but measurement in the countryside is difficult since the quantity of asbestos looked for is so small, and the quantity of things such as natural dust and pollen is so great, that it is scientifically difficult to detect asbestos. He added that the four studies don't attach much importance to environmental measures away from centres of major contamination.

Mr. Eddy Cauchi said, "I represent myself... an ex-asbestos worker who's suffering from asbestos dust inhalation... I'm speaking on my own behalf and for some of my fellow workers..." He asked if the major types of asbestos have the same toxicity. He commented on results of studies of the subject, some which showed that many people with asbestos-related lung cancer were not working in the asbestos industry. He discussed the Le Doux study of 1949 which showed a very high rate of deaths from lung disease in the general population of asbestos mining towns in Quebec.

He said the accepted standard dust level of 2 fibres/cc allows a worker to inhale 16 million fibres each working day, and those are only the long fibres which can be seen with the microscope--one in one hundred.

He stated that 60 percent of his fellow workers who died in the last 25 years never smoked or drank, so it was not cigarette smoking that caused their disease. He suggested that "if you're going to listen to the asbestos industry spokesmen at these hearings, I hope you only take them with a grain of salt."

Dr. Atherley, stressing that his response was his own personal view and did not represent CCOHS or the Commission, said that the issue of blue versus white asbestos in regard to health hazards is not merely a matter of science. "The regulatory authorities, asbestos companies, and experts in the U.S. are all of the same view -- that the blue and white asbestos are equally dangerous ... it's no accident that the European authorities take the opposite view; ... the answer lies in other domains outside science."

Mr. Charles Neilson, Past-President of the Energy and Chemical Workers Union, Local 26, at Johns-Manville, asked how asbestosis is "measured" and said the information he has on it leads him to believe it is by guess. He commented on the statements by the two representatives of the Quebec Asbestos Mining Association, summing them up in his statement "I would never believe a word they said." He noted their history included "trying to hide from the men what was going on" in regard to health records and asbestos hazards.

Commenting on asbestos hazards and the public, Mr. Neilson wondered about the possibility that something might happen in 20 or 25 years to those high school students who walk past the plant every day, some of whom played on its property years ago before it was fenced. He said that the Workmen's Compensation Board and the government should be concerned with the open asbestos dump covering an area several miles square near one of the company's buildings in Port Union which was closed in May.

Dr. Atherley said he was not qualified to answer the question of the diagnosis of asbestosis for compensation purposes and none of the reports considered the question of diagnosis and compensation.

On the question of sampling devices, Dr. Atherley said the four reports showed there are considerable unreliabilities attached to sampling as it is currently done. They point out the need to agree on a sampling strategy to avoid variabilities which are important not only to research but from the point of view of enforcement and regulation.

4. Panel Presentation on the Schools Programme for Detecting and Controlling Asbestos in Ontario

The third part of the agenda was chaired by Commissioner Dr. Robert J. Uffen. It began with a panel presentation on the "schools programme" for detecting and controlling asbestos in Ontario.

Panel participants introduced by Dr. Uffen were:

Mr. Stanley Orlowski, Associate Chief Architect, Grants Policy Branch, Ontario Ministry of Education;

Mr. Keith Reilly, Public Safety Division, Office of the Fire Marshal, Ontario Ministry of the Solicitor General;

Dr. Gerald Ridge, Director, Capital Programming and Research, Metropolitan Toronto School Board (on behalf of the Association of Large School Boards of Ontario);

Mrs. Sheila Parker, Chairman, Northumberland-Newcastle Board of Education; and

Mr. Doug Craig, Ontario Association of School Business Officials (OASBO), and his colleagues, Mr. Herb Nasby and Mr. Bill Keith.

(a) Presentation by Mr. Stanley Orlowski:

Mr. Orlowski is a member of the Royal Architectural Institute of Canada. He has held several architectural positions with the Ontario Government since 1967. He has been a lecturer and visiting professor in Canada and Europe, and an advisor to International Organizations, such as UNESCO.

Mr. Orlowski opened his talk and slide presentation with a short history of the programme for elimination of asbestos in schools, from the time of the Ontario Department of Education's awareness, in 1968, of possible dangers to students' health resulting from the use of asbestos in art materials. A memorandum was issued in that year to all Directors of Education and principals of schools requesting that the use of asbestos powdered products be discontinued. Another memorandum in 1974 forbid the use of asbestos in art shops in schools.

In 1969, the architectural staff of the Department of Education alerted authorities of schools and colleges not to use exposed sprayed asbestos in physical education facilities. In 1976, a Ministry of Colleges and Universities publication noted an item of information on asbestos-containing building materials banned by the Greater London Council.

Asbestos materials were widely used in construction and were found in educational buildings in sprayed asbestos fireproofing; thermal and acoustic insulation; asbestos cement pipes, siding; and shingles; vinyl asbestos tile; paints and joint fillers; fire blankets and curtains; and moulded plastic products.

Concern for the health of construction workers led to gradual reduction in the use of asbestos-based materials; studies of asbestos were undertaken by government and universities. In June of 1979, the Ministry of Education and Colleges and Universities issued a memorandum asking school boards, colleges and universities to undertake a survey of all their buildings to identify asbestos containing materials.

The Ministry's aim was to identify the asbestos hazards and to develop a programme of correction involving four options: encapsulation (covering with a suitable sealant); enclosure (with material such as drywall); complete removal; and simple monitoring. Of particular concern were materials containing friable (flaky and dusty) asbestos.

The Ministry of Labour set up an interministerial working group of representatives from the Ministries of Environment, Consumer and Commercial Relations, Health, Education/Colleges & Universities, and Labour, and produced a manual, "Inspecting Buildings for Asbestos," which was sent to all school boards, colleges,

and universities this year. All were instructed to send samples suspected of containing asbestos to labs for analysis. Results showed that about six percent of the province's schools contained friable asbestos and six percent contained non-friable asbestos materials. Educational buildings involved in the survey totalled about 5,000 schools, 17 universities, and about 100 community college campuses. School boards were asked to take corrective action to remove asbestos hazards regardless of the level of asbestos fibre found in air sampling. The Ministry of Education arranged for the services of the Ministry of Labour's Occupational Health Lab and assured educational authorities that funds would be available for elimination of hazardous asbestos conditions. The programme was to continue into 1981. Because of the work overload in testing the samples, some university laboratories and the Ontario Research Foundation had to be used for analyzing materials.

The control programme has been guided by certain principles: friable asbestos hazards should be eliminated from schools; experts should carry out the physical examinations of buildings; and sealants used should have approval on two levels: proof from the manufacturer that it was tested by a reputable lab in accordance with the U.S. Environmental Protection Agency specifications; and approval of the Ontario Fire Marshal to ensure that fireproofing would be protected.

Procedures used for eliminating asbestos include dry or wet removal. In wet removal, the work is done by spraying water containing a detergent-like additive to loosen the asbestos. All contaminated materials have to be cleaned and all the materials to be discarded have to be placed in plastic bags, packed in cartons, and properly labelled. They are discarded in designated areas with the approval of dumping authorities and transported only with approval of transportation authorities. Health safety measures require that all workers wear appropriate protective clothing and shower after working in contaminated areas.

Mr. Orlowski advised calm assessment of asbestos hazards and careful planning of cleanup programmes, as panic may lead to costly errors. "We have to remember that somebody, or all of us, is paying for the job," he said.

(b) Presentation by Mr. Keith Reilly

Mr. Reilly is with the Consulting Services Section, Public Safety Division, Office of the Ontario Fire Marshal. He is a graduate of chemical engineering from the University of Toronto, and has been with the Fire Marshal's Office since 1959. For the past 20 years he has been involved with the school plans approval programme.

Mr. Reilly focused on the position of the Fire Marshal's Office in regard to the Ontario government's schools programme for eliminating asbestos hazards.

Ever since 1958, the Ministry of Education has required school boards to obtain the approval of the Office of the Ontario Fire Marshal for plans of school building projects, including alterations, renovations, and various other projects. "We consider these asbestos treatment projects as just another type of alteration," Mr. Reilly said. "And our approval is required for them. This was indicated in a memorandum we sent to school boards this year," he added.

In his talk, he stressed that the interest of the Fire Marshal's Office is to ensure that in treating materials containing asbestos, for health safety purposes, the various fire safety features incorporated in the buildings are maintained. "We only assess proposed materials and methods used in asbestos treatment projects from their fire safety standpoint; we do not assess their effectiveness on treating asbestos since this is the responsibility of other government agencies." He added that the Fire Marshal's Office wants to make certain the sealants used do not act like a mixture of gunpowder and gasoline! He said he once considered that a joke until he found that some of the sealants tested actually burned quite easily.

Mr. Reilly explained that encapsulation agents must meet Ontario's current Building Code regulations with respect to flame-spread ratings and smoke-developed ratings. Where ratings are required, materials used must be those listed by testing labs which provide labelling services. This service ensures that the product will be periodically re-tested as it comes off the production line to ensure that the manufacturer is not changing the formula.

The Office of the Fire Marshal recognizes three laboratories: Underwriter's Laboratories of Canada; Underwriter's Laboratories Inc. (U.S.A.); and Warnock-Hershey Professional Services Canada. Mr. Reilly said that if the enclosure method of eliminating asbestos hazards is used, the new materials must comply with the present Building Code regulations concerning flame-spread ratings, as should new materials replacing asbestos which has been removed. He added that one of the main concerns in regard to encapsulation materials is that they will knock off the sprayed fire protection which they are supposed to encapsulate.

He explained that the matter of whether or not structural members in a building require fire protection depends on the size of the building and on the type of occupancy (such as school, hospital, or restaurant) and is based on construction regulations which have been in the Ontario Building Code since 1976. Prior to 1976, the requirements of the Ontario Building Fire Safety Design Standards were used for school construction; and those were based on the requirements of the National Building Code of Canada.

The codes are performance-type codes which do not specify materials which must be used, but only indicate the degree of fire resistance required. Most schools in Metro Toronto are required to be non-combustible with a fire resistance of one hour in floor and roof assemblies. Methods used to obtain those ratings are left to the school boards and their architects.

Mr. Reilly described the ways these ratings might be obtained. He noted that sprayed asbestos fire protection on structural steel members was not widely used in schools in Ontario, either because the schools were small, or because a membrane ceiling type of protection was used.

All fireproofing materials removed from structural steel or wood members must be replaced with materials providing equivalent fire protection.

(c) Presentation by Dr. Gerald Ridge

Dr. Ridge holds a Ph.D. in geography from McGill University. He has been involved in education planning in the Metropolitan Toronto area for 25 years. He is currently the Director of Capital Programming and Research for the Metro Toronto Board of Education. Earlier this year, that Board

co-ordinated an Advisory Task Force on Asbestos, which produced a document now being used by many school boards in their asbestos cleanup programmes. Dr. Ridge participated on the schools programme panel on behalf of the Association of Large School Boards of Ontario.

Dr. Ridge described events leading up to formation of the Advisory Task Force on Asbestos in Schools, and its work.

In 1979, Ministry of Education memorandum (referred to earlier by Mr. Orlowski) precipitated the concern of the Area School Boards and the Metro Toronto School Board for the health hazards of asbestos. The Metropolitan Toronto School Board (MTSB) is the financial agency for the six Area School Boards in Metro Toronto. Area Boards undertook a survey of schools for asbestos in the fall of 1979. By December, the Technical Committee, composed of senior technical officers of each board, met to discuss the problem. In March of 1980, after an extensive review of schools was carried out, the Technical Committee recommended to the MTSB that an Advisory Task Force on Asbestos in Schools be established.

The Task Force was established on March 11, 1980 and was charged with the responsibility of determining the extent of the asbestos problem in the schools, and with recommending necessary and appropriate corrective action. It was composed of members from each of the seven school boards, a representative from the Ministry of Education, and people skilled in such areas as engineering, construction, etc.

The Task Force reviewed reports on asbestos and prepared a practical report that could be used as a guideline in the asbestos elimination programme. The Advisory Task Force presented its report, containing 45 recommendations, in May. In June, the MTSB adopted nine recommendations of the Technical Committee and used the first recommendation as its statement of policy:

"that with the knowledge that friable asbestos containing materials incorporated in buildings create a potential health hazard, it is essential that [it] ultimately be removed, and where not possible, be isolated in all educational facilities."

Most Area Boards of Education and MTSB adopted the report as a guideline for use in the elimination of hazardous asbestos in educational buildings. The Report has been widely used outside the Metro Toronto area as well.

This year, \$3,300,000 worth of asbestos elimination projects were approved for Ministry of Education grants. The MTSB has agreed to provide \$6 million per year for three years for elimination of asbestos hazards. Inspection, detection and testing programmes in Metro Toronto have been completed, and elimination and cleanup programmes are underway.

(d) Presentation by Mrs. Sheila Parker:

Mrs. Parker spoke as the Chairman of the Northumberland-Newcastle Board of Education. She has completed her fourth year as a Trustee. She was educated in Toronto and taught elementary school here until 1968 when she retired to raise her three children.

Mrs. Parker described the Northumberland-Newcastle School Board's participation in the Ontario government's programme to eliminate asbestos from educational buildings. Her talk focused on preliminary work leading up to the school closing and asbestos removal operation begun in October in Bowmanville High School.

In that school, it was found that some of the fireproofing supposed to have been incorporated in the building during construction was missing. Sprayed asbestos had been used on the structural steel beams supporting the roof and the second storey floor. Because the ceiling enclosed area beneath the roof beams was used as part of the ventilation system, asbestos fibres from the fireproofing material were being circulated through the air.

In August, 1980, the Board made the decision to close the school and carry out extensive testing to determine the extent of the asbestos problem. In September, 1200 students and 65 staff, and their necessary equipment and supplies, were temporarily housed in Courtice Secondary School. Sharing facilities resulted in classes being conducted on a cycle basis: Courtice School in session in the morning and Bowmanville School in session in the afternoon.

The task of keeping the school programme and staff intact involved not only efficiency in moving equipment and supplies in and out, on a daily basis, but attention to details such as arranging bus transportation for students.

The cost of the programme for removing about 100,000 square feet of asbestos material is estimated at \$527,800 and is due to be completed in January, 1981. The Ministry of Education is expected to pay 90 percent of the costs.

(e) Presentation by the Ontario Association of School Business Officials (OASBO)

Mr. Douglas Craig represented OASBO on the schools programme panel. He is the chairman of that organization's Operations, Maintenance, and Construction Committee. He is a member of the Royal Architectural Institute of Canada, and has had 17 years of experience in Ontario Boards of Education.

Mr. Craig and his colleagues, Mr. Herb Nasby and Mr. Bill Keith, presented some of their front-line experiences with the asbestos programmes of three Ontario school boards.

In commenting on the Ontario government's programme for eliminating asbestos in schools, Mr. Craig pointed out that ultimately the safety of schools lies with the autonomous school boards.

Mr. Craig introduced Mr. Herb Nasby of OASBO who described asbestos hazard elimination operations carried out in three secondary schools situated in one Ontario school board.

Mr. Nasby said that lab reports on analyses done on samples of material taken from the three schools involved showed from 5 to 50 percent asbestos content. Assisted by an architectural firm, the school board in question determined the extent of their asbestos hazard and made plans for its elimination.

In one school, a ceiling area of about 1000 square feet had been fireproofed with sprayed asbestos and finished with plaster. The asbestos was encapsulated with a sealer and enclosed where necessary. Lighting units had to be modified to the lowered ceiling created by the drywall enclosure. The cost of the project was \$1,700.

A second school had about 22,500 square feet of acoustic plaster ceiling which contained asbestos from which fibres would occasionally "drop." Another 17,500 square feet of the same type of ceiling had been painted with enamel and showed no "drop." The asbestos-containing material was encapsulated, and some was also enclosed. The total cost was \$41,142.

In the third school, friable asbestos had been used as a fire-protector on structural steel and in duct systems. A review of building plans and specifications showed that acoustic plaster containing asbestos had been specified for bulkheads, skylights, and some ceilings. Total area involved was about 80,000 square feet.

It was discovered that fire protection for structural beams and columns, required by the 1965 Building Code, had never been applied. The space above corridor ceilings, containing asbestos sprayed structures, was used as a return air plenum for the ventilation and air conditioning system. Remedial operations included moving the students and staff to a temporary location; cleaning and storing all movable equipment and furniture; and removing lockers and structures such as ceilings to facilitate the work. Friable asbestos was encapsulated; beams and columns were fireproofed as necessary; acoustic plaster areas were encapsulated and/or enclosed with drywall; and a complete new ceiling system compatible with negative pressure resistance was installed.

The work, which was begun in August, was completed in October. The final cost estimate will include \$718,000 for encapsulation, \$200,000 for fireproofing, and costs of materials, transportation, and cleaning.

Mr. Craig then introduced Mr. Bill Keith who spoke about his experiences as a business official in another school board.

Mr. Keith spoke of actions taken by his Board of Education in the matter of asbestos control in schools, giving a case history of a particular one.

He described several tests done on air and materials in schools and said that at one point, on checking the air outside the school, they found it to be slightly higher than the interior in asbestos fibre content. "We can't get the interior very much below what's outside," he said.

He stressed the importance of re-checking asbestos fibre levels as he found a new hazard area on the third check. He suggested that the \$9 million estimate of the cost of removing asbestos from Ontario schools was low: "It's going to be a lot more than that."

Mr. Craig summarized his colleagues' presentations by saying, "the school community, both on the political level and on the administrative level, is very aware of the asbestos problem and is doing something about it." He spoke of the difficult and subjective local process the school business officials go through in making the decisions on whether asbestos materials should be left alone, coated, or taken down.

The panel presentations were followed by a brief question period.

Dr. E.K. Fitzgerald, Medical Officer of Health, Scarborough, commented, "...I think they (the Commission) will bring to the subject of asbestos a degree of common sense...needed more than anything else; as well as some method of cutting through the hyperbole and the anxiety that has been created through various sources; and possibly they may even have the strength to cut through some of the political motivations that have prompted a lot that has gone on in the last year." Dr. Fitzgerald spoke about the importance of checking the exterior, ambient air in assessing asbestos problems before undertaking expensive cleanup operations. He told how, in 1975, on checking asbestos levels at a Johns-Manville plant, the levels outside, within 100 to 200 yards of the plant, were found to be no different than those in downtown Toronto and in several other cities and towns checked. "People, I think, are being too emotional, and too political; and are quick to spend money on a problem before they've really identified they've got a problem and that the action they're going to take will cure it."

Mr. Doug McVittie of the Construction Safety Association of Ontario asked if the Ministry of Education had prepared standard specifications for asbestos hazard correction procedures.

Mr. Orlowski answered "No," but said that guidelines had been prepared. He also said that there are only about four companies in Ontario with people who can remove asbestos properly. Mr. Douglas Craig noted that the Ministry of Education only guides autonomous school boards which draw up their own specifications for building or renovating schools.

Mr. Fred Gallop, a retired Johns-Manville employee, asked Mrs. Parker if asbestos fibres were found in the filters used in the school's air plenums.

Mrs. Parker said it was her understanding that the asbestos fibres pass through the filters.

Mr. Gallop asked if filters like those used in the air testing devices, which presumably do trap all fibres, would eliminate a lot of the asbestos problem in the school (i.e. Bowmanville High School).

Mrs. Parker said that she was advised that adequate filters are available but not in the size required for the ventilation system in that school.

Mr. Gallop commented on that being a mechanical problem which the heating designers of schools should work on. He said, "...if you had adequate filters in the returning air system...a lot of our discussion today would be unnecessary."

Mr. David Naish is a member of the Canadian Union of Public Employees and is an employee of the Northumberland-Newcastle Board of Education; he is also a former employee of Johns-Manville. Mr. Naish spoke of an asbestos hazard elimination programme carried out on one of the schools in Northumberland-Newcastle without any of the health safety precautions outlined in Mrs. Parker's description of the Bowmanville programme. It involved the taking of material samples by maintenance staff, followed in a few hours by a contractor's team coming into the school and removing material from pipe racks in classrooms. He said most of this material was removed dry, and that cleanup by custodians consisted of sweeping and dusting the rooms. Subsequent tests done by the local union showed that the material removed was up to 50 percent asbestos. He wondered why the Board moved so quickly in that case and did not follow normal safety practices. "I think that part of our Board's programme was absolutely disgusting."

Mrs. Parker answered that the assumption of the Board was that all corrections were being carried out using proper conditions. She was not aware of the situation he described; this was the first she's heard of dry removal of asbestos. She promised to look into the matter.

Mr. Bill Keith spoke of encapsulation as a method of correcting a problem as quickly as possible; one which is not necessarily a permanent correction. He said it was not money that prompted the Board's decision to encapsulate rather than remove asbestos. "It was to protect the children as quickly as we could."

Mr. Don Dunlop of the Etobicoke Board of Education served as Chairman of the Metro Toronto Advisory Task Force on Asbestos in Schools. He suggested that as the schools are well along in their programmes for eliminating their asbestos problems, the Commission has two major aspects of asbestos to study: how it affects the workplace; and how it affects the general environment. He commented on problems of having no set standard for levels of asbestos in the general environment; and having to make decisions on when to encapsulate. He said "when it becomes a question of inconvenience and...a question of money, all of a sudden there's a different assessment placed on the problem."

Dr. Uffen assured Mr. Dunlop that the Royal Commission on Asbestos would be looking into these points.

Mr. David Powell, Instructor in the Environmental Studies Programme, University of Toronto, asked Mr. Reilly why a one-hour fire rating for materials used in buildings was necessary.

Mr. Reilly said it is not only a matter of life safety, but one of building safety and the safety of firefighters.

Dr. Uffen, in thanking all participants, said that quite a large number of important points have been identified today, which was one of the objectives of the first public meeting.

